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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Implementation of Sections 3(n)	)	
and 332 of the Communications Act	)	GN Docket No. 93-252
	)	
Regulatory Treatment of	)	
Mobile Services	)	

COMMENTS OF MOTOROLA, INC.

Motorola, Inc. ("Motorola") hereby submits these comments in response to the Further Notice of Proposed Rule Making adopted by the Commission in the above captioned docket on April 20, 1994. As a leading manufacturer of equipment used by both private and common carrier mobile radio licensees, Motorola endorses the efforts of Congress and the Commission to promote the development of a robust and competitive mobile services marketplace. Because achievement of this goal does not require the adoption of a limit on the amount of commercial mobile radio spectrum that may be aggregated by individual operators, the spectrum cap proposal should be rejected. In addition, Motorola anticipates having specific comments to be advanced on reply that will respond to the Commission's proposals concerning the technical, operational, and licensing rules applicable to mobile services licensees.

Respectfully Submitted By:

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TABLE OF CONTENTS

I. INTRODUCTION AND SUMMARY

Motorola hereby files these comments in response to the Further Notice of Proposed Rule Making recently adopted by the Commission in the above-captioned docket.[1] As a leading manufacturer of equipment for both private and common carrier mobile radio licensees, Motorola has a strong interest in furthering the efforts of Congress and the Commission to foster the development of a vibrant and highly competitive mobile services marketplace. To this end, Motorola acknowledges the comprehensive and thorough attempt undertaken by the Commission in the *Further Notice* to identify the technical, operational, and licensing rules that must be amended in order to eliminate inconsistencies in the regulatory treatment of substantially similar commercial mobile radio service ("CMRS") providers. Motorola has been working with other members of the mobile services industry to develop an industry-wide consensus in response to the Commission's specific proposals in this regard. Because this process is still on-going, Motorola plans to discuss these aspects of the *Further Notice* in its reply comments.

In addition to its review of the rules applicable to CMRS providers, the Commission seeks comment as to whether the level of competition in the CMRS marketplace would be increased by the imposition of a general cap on the amount of CMRS spectrum that licensees are allowed to aggregate.[2] Specifically, the Commission raises the concern that the flexible regulatory environment created for the

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[1] Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, FCC 94-100 (May 20, 1994) [hereinafter *"Further Notice"*].

[2] *Id.* ¶ 89.

provision of services classified as CMRS may permit licensees able to accumulate large amounts of CMRS spectrum to acquire excessive market power by foreclosing opportunities for potential competitors. To prevent this type of conduct, the Commission suggests that it may be appropriate to impose a cap on the total amount of CMRS spectrum that any one licensee may accumulate, and tentatively concludes that the cap should approximate the amount of spectrum that can be held by a single licensee under the combined broadband and narrowband PCS allocations.[3] Accordingly, the agency proposes to levy a 40 MHz limit adjusted upward to allow reasonable flexibility for PCS licensees and other existing mobile service providers to offer both broadband and narrowband services. Similarly, the Commission tentatively concludes that, in applying the spectrum cap, all CMRS ownership interests of five percent or more should be attributable to the holder.[4]

As discussed in detail in the following comments, Motorola strongly opposes the Commission's spectrum cap proposal. At the outset, the imposition of a general CMRS spectrum aggregation limit is unnecessary because the Commission's existing rules already ensure that no single licensee is able to dominate the CMRS marketplace. In addition, an across-the-board CMRS spectrum cap would, by its very nature, unfairly prohibit existing licensees from participating in new spectrum allocations and future technological developments. This in turn would disserve the public interest by

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[3] *Id.*

[4] *Id.* ¶ 93.

preventing consumers from enjoying the numerous benefits that adhere in the expertise and capital investments brought by existing licensees to developing services.

If the Commission nevertheless decides to impose a CMRS spectrum aggregation limit, a number of complex issues must be resolved to ensure that the cap is applied in an equitable manner. Specifically, to help guarantee the fair application of any CMRS spectrum aggregation limit, Motorola urges the Commission to:

- clarify that satellite and earth station licensees offering space segment capacity to CMRS-type service providers are not included in the spectrum cap;
- make plain that fixed microwave frequencies used in support of CMRS operations are not included in the spectrum cap;
- devise the overall level of the spectrum cap in a manner that takes into account the number of different services to be included;
- formulate a methodology for calculating geographic overlap that fairly reflects the various existing CMRS service areas and does not unfairly penalize the holding of minority interests in CMRS licensees; and
- devise a more realistic attribution rule that does not unduly restrict broad-based participation in new services.

II. THE COMMISSION SHOULD NOT ADOPT A BLANKET SPECTRUM CAP APPLICABLE TO ALL SERVICES CLASSIFIED AS CMRS

Motorola opposes the Commission's proposal to place a general cap on the amount of CMRS spectrum that an individual licensee may accumulate in a given geographic area. As the following discussion demonstrates, the imposition of an

across-the-board CMRS spectrum aggregation limit is not necessary to address any valid competitive concerns, and would be contrary to the best interest of the public.

First, in an earlier phase of this proceeding, the Commission explicitly found that, with the possible exception of cellular, all of the mobile services that comprise the broader CMRS rubric are competitive, and that, with the exception of cellular licensees, no existing CMRS service provider has market power.[5] With regard to cellular, the Commission concluded that sufficient competition exists to justify the exercise of the agency's forbearance authority under revised Section 332 of the Communications Act, but that the record is inconclusive as to whether the cellular marketplace is "fully competitive."[6] Although the Commission's analysis in the *Second Report and Order* focussed on whether the level of competition in the CMRS services is sufficient to justify forbearance, its general findings are equally applicable here. These findings clearly demonstrate that the concerns raised in the *Further Notice* with regard to the potential for anti-competitive behavior among CMRS providers are wholly speculative and are unsupported by the record.

In addition, the Commission's rules already ensure that no single licensee is able to dominate the CMRS marketplace. Specifically, the eligibility rules applicable to PCS licensees foreclose the accumulation of broadband PCS spectrum by restricting the

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[5] *See* Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, 9 FCC Rcd 1411, 1467-72 (1994) (Second Report and Order) [hereinafter "*Second Report and Order*"].

[6] *Id.* at 1467, 1472.

total amount of cellular and PCS spectrum that may be held by a single cellular licensee to 35 MHz, and by limiting all other PCS operators to a total of 40 MHz of broadband PCS spectrum in a given geographic area.[7] Similarly, the rules applicable to narrowband PCS operations prohibit a single entity from holding more than three 50 kHz channels in any given area.[8] A five percent attribution rule is used to calculate ownership interests in multiple PCS licensees in the same market in both the broadband and narrowband PCS contexts.[9] A 20 percent attribution standard is used in calculating the interests of cellular carriers seeking to provide broadband PCS service in their cellular service areas.[10] Also, the Commission has existing rules in each of the rule parts applicable to mobile service providers that prohibit a licensee from warehousing spectrum to the disadvantage of potential competitors by requiring stations

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[7] Amendment of the Commission's Rules To Establish New Personal Communications Services, FCC 94-144, ¶¶ 66, 67 (June 13, 1994) [hereinafter *"Broadband PCS Reconsideration Order"*]. A cellular operator seeking to provide broadband PCS service in its cellular service area is limited to one of the 10 MHz BTA licenses. Amendment of the Commission's Rules To Establish New Personal communications services, 8 FCC Rcd 7700, 7745 (1993) (Second Report and Order) [hereinafter *"Broadband PCS Order"*], *recon.*, Amendment of the Commission's Rules To Establish New Personal Communications Services, FCC 94-144 (June 13, 1994). Similarly, companies that are deemed to hold attributable interests in cellular licenses covering 10 percent or more of the population in a PCS service area are limited to holding a single 10 MHz PCS license in that area. *Id.* at 7728. Cellular carriers will be allowed to acquire an additional 5 MHz of PCS spectrum after January 1, 2000. *Broadband PCS Reconsideration Order* ¶ 67.

[8] Amendment of the Commission's Rules To Establish a New Narrowband Personal Communications Service, 8 FCC Rcd 7162, 7168 (1993) (First Report and Order) [hereinafter *"Narrowband PCS Order"*], *recon.*, Amendment of the Commission's Rules To Establish New Narrowband Personal Communications Services, 9 FCC Rcd 1309 (1993) (Memorandum Opinion and Order) [hereinafter *"Narrowband PCS Reconsideration Order"*].

[9] *Broadband PCS Order*, 8 FCC Rcd at 7728; *Narrowband PCS Reconsideration Order*, 9 FCC Rcd at 1313.

[10] *Broadband PCS Order*, 8 FCC Rcd at 7745.

to be constructed and placed in operation within a limited period of time after a license is issued.[11]

Furthermore, as mentioned above, the imposition of an overall CMRS spectrum cap would by its very nature unfairly prohibit existing licensees from participating in new spectrum allocations and future technological developments. By precluding existing operators that approximate or exceed the spectrum aggregation limit from taking part in newly established services and developing technologies, the Commission would deprive the public of the well-established benefits brought by existing operators to new services by virtue of their expertise, potential capital investments, and economies of scope.[12] Because the contributions of existing licensees generally expedite the delivery of new services, the exclusion of existing operators will seriously delay the rate at which new services and technologies are brought to the public.

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[11] *See, e.g.*, 47 C.F.R. §§ 22.43(a)(2) (1993) (Public Land Mobile); 90.155(a) (1993) (Part 90 generally); 90.633(c),(d) (1993) (conventional SMRs); 90.725(f) (1993) (local 220-222 MHz licensees). *See also* Amendment of the Commission's Rules to Provide Channel Exclusivity To Qualified Private Paging Systems at 929-930 MHz, 8 FCC Rcd 8318, 8340 (1993) (Report and Order) (900 MHz paging rule to be codified at 47 C.F.R. § 90.495(c)), *recon. pending; Broadband PCS Order*, 8 FCC Rcd at 7813 (broadband PCS rules to be codified at 47 C.F.R. § 24.206); *Narrowband PCS Order*, 8 FCC Rcd at 7193 (narrowband PCS rules to be codified at 47 C.F.R. § 24.17). Although the PCS rules were originally to be codified in Part 99, this rule part has been redesignated as Part 24. *Second Report and Order*, 9 FCC Rcd at 1525.

[12] *See Broadband PCS Reconsideration Order* ¶ 110. The Commission adopted a comparatively liberal 20 percent attribution standard for cellular/PCS cross ownership in recognition of the fact that cellular participation in PCS would promote the early development of PCS through cellular carriers' expertise and by permitting attainment of economies of scope between PCS and cellular service and existing infrastructure. In addition, the Commission found the 20 percent limit more responsive to the history of cellular settlement practices. *Id.*

To avoid such a result, Motorola suggests that, rather than imposing a blanket spectrum cap, the Commission continue using service-specific spectrum limits such as those devised in the PCS context. Service-specific limits are preferable to an overall spectrum cap not only because they allow operators the flexibility to participate in a diverse array of services, but also because the imposition of restrictions on a service-by-service basis permits the Commission to compile a complete record. A full understanding of the issues in turn enables the Commission to consider the amount of spectrum that must be aggregated in particular services to allow the transmission of reliable communications. The compilation of a complete, service-specific record would also allow the Commission to devise spectrum aggregation limits that take into account the applicable technological constraints as well as the types of communications sought to be transmitted on the frequencies in question.

III. IF THE COMMISSION DOES ADOPT ANY SORT OF SPECTRUM CAP, IT MUST RESOLVE A NUMBER OF DIFFICULT ISSUES IN ORDER TO ENSURE THE FAIR AND JUST APPLICATION OF THE SPECTRUM AGGREGATION LIMIT

If the Commission nevertheless decides to adopt an overall CMRS spectrum aggregation limit, it must first resolve a number of difficult issues that have the potential to seriously impair the competitive viability of CMRS operators. These issues include: (1) ascertaining which CMRS spectrum should be included in the cap; (2) designing an appropriate spectrum aggregation limit; (3) formulating an appropriate methodology for calculating geographic overlap as well as the unequal yield of

encumbered spectrum; and (4) devising an attribution rule that takes into account the number of services classified as CMRS. Motorola submits the following comments with regard to each of these specific considerations.

A. Spectrum Included in the CMRS Aggregation Limit

Motorola urges the Commission to clarify that the following activities will not be included in any overall CMRS spectrum cap that the agency may decide to adopt: (1) the provision of satellite space segment capacity to CMRS-type service providers; and (2) the use of fixed microwave frequencies utilized in support of CMRS operations. Because neither of these spectrum uses constitutes a CMRS operation, both are inappropriate for inclusion in calculating a licensee's CMRS holdings for purposes of imposing a spectrum cap.

First, as discussed in detail in Motorola's comments filed in response to the Commission's initial Notice of Proposed Rule Making in this proceeding, the provision of Mobile Satellite Service ("MSS") space segment capacity by Big LEOs, such as Motorola's IRIDIUM system, should not be classified as CMRS because these providers do not satisfy the definitional test for regulation as a "commercial mobile radio service."[13] Space segment providers merely offer bulk capacity to gateway earth station operators who, in turn, may or may not offer commercial mobile radio

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[13] *See* Comments of Motorola, Inc., GN Docket No. 93-252, at 14 (filed Nov. 8, 1993). *See also* comments of Motorola Satellite Communications, Inc., CC Docket No. 92-166, at 66-67 (filed May 5, 1994) (citing various public interest and policy considerations for why non-common carrier treatment of Big LEOs is necessary).

service. As such, it is the gateway operator, not the space segment provider, that could potentially be regulated as a CMRS provider.

However, it is premature to ascertain whether a spectrum cap should apply to gateway operator/earth station licensees. Like MSS space segment licensees, earth station licensees may not provide service directly to end users. Rather, these licensees may decide to limit their activities to the resale of bulk space segment capacity to unaffiliated service providers that offer services classified as CMRS. Accordingly, Motorola urges the Commission either to exclude both the provision of space segment capacity by Big LEOs and by earth station licensees from any CMRS spectrum aggregation limit, or to exclude the activities of Big LEOs on a general basis, and to evaluate the activities of earth station licensees on a case-by-case basis before subjecting them to a CMRS spectrum aggregation limit.

In addition, because so-called "backhaul" channels are used solely for the purpose of establishing an internal infrastructure throughout a licensee's system, and are not used to provide service to the public, these frequencies should not be included in imposing a CMRS spectrum cap. Examples of such backhaul facilities include: (1) cellular and wide-area SMR operators' use of fixed microwave links for the purpose of accommodating hand-offs, interconnecting cell sites and the mobile telephone switching office, and facilitating interconnection to the public switched telephone network; and (2) paging operators' use of point-to-multipoint "control" channels for the purpose of tying together base stations so that a page can be simultaneously transmitted

to each base station. Motorola urges the Commission to clarify that spectrum used for such purposes will not be included in a general CMRS spectrum aggregation limit.

B. Level of Spectrum Cap

Motorola also urges the Commission to devise the overall level of the spectrum cap in a manner that takes into account the number of different services to be included. At present, the services classified as "commercial mobile" potentially include cellular, PCS, SMR, paging, commercial 220-222 MHz operations, mobile telephone, air-to-ground, and certain satellite services. The imposition of a 40 MHz cap on the amount of spectrum that may be accumulated across all of these services, as proposed in the *Further Notice*, is unreasonable because it fails to account for the extensive number of services classified as CMRS. Furthermore, the imposition of a blanket 40 MHz spectrum aggregation limit is inconsistent with the Commission's broadband PCS rules, which apply a 40 MHz cap in the context of a single broadband service.

If the Commission adopts a CMRS spectrum aggregation cap, it will be necessary for the agency to issue a Further Notice that explores the appropriate level of the cap and solicits comment on the considerations that must be taken into account in order to devise a cap responsive to the characteristics of each service included therein.[14] A spectrum cap that is too low runs the risk of unfairly disadvantaging

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[14] For example, in the *Broadband PCS Reconsideration Order*, the Commission explained that it adopted a 20 percent cellular/PCS cross-ownership attribution standard in order to account for the fact that settlements during the initial phases of cellular licensing resulted in numerous partial and non-

(continued...)

existing CMRS operators by prohibiting them from participating in the full range of services classified as CMRS. Such a result is inconsistent with the Congressional mandate that prompted this proceeding, which seeks to ensure that all functionally equivalent mobile service providers are subject to the same regulatory burdens and regulatory benefits.[15]

C. Spectrum Irregularity

Before an overall CMRS spectrum cap can be applied in an equitable manner, the Commission must also formulate a methodology for calculating geographic overlap that fairly takes into account the broad panoply of service areas used in the licensing of existing CMRS operators. For example, PCS licenses are issued on the basis of BTAs and MTAs, cellular is licensed on the basis of MSAs and RSAs, and paging and Part 90 service areas are generally defined by the operations of the applicable licensee. All of these service areas overlap, however, and a spectrum cap must include a methodology for calculating the extent of permissible overlap, and for ensuring that those entities that have an allowable minority interest in numerous different operations are not unfairly penalized by the levying of a general spectrum limit.

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[14](...continued)
controlling interests of cellular licenses. As a result, the Commission determined that it would be unfair and unduly restrictive to impose the five percent attribution rule applicable to multiple PCS licensees in the same market in the cellular/PCS cross-ownership context. *Broadband PCS Reconsideration Order* ¶ 110.

[15] *See Second Report and Order,* 9 FCC Rcd at 1418.

In addition, the overall spectrum aggregation limit must be applied in a manner that recognizes that different spectrum bands have unique characteristics that affect their usage. Such differences might include: shared versus exclusive use; nationwide versus single market availability; "clear" spectrum versus spectrum encumbered by a number of other users; contiguous versus non-contiguous frequency assignments; and wide-area range versus limited talk-out range. Each of these factors affects the usefulness of frequencies in terms of either the amount of traffic that can be accommodated or the nature and reliability of transmissions. Manifestly, these considerations must be taken into account and included in the fashioning of an overall spectrum aggregation limit. Reliance on service-specific caps would allow the Commission to avoid having to resolve these issues, which are extremely complicated and defy the quantification inherent in the imposition of an across-the-board CMRS spectrum aggregation cap.

D. Attribution Rules

The five percent attribution rule proposed by the Commission for application to ownership interests in all CMRS services is overbroad and unwarranted given the level of competition in the CMRS marketplace. As such, the use of a five percent attribution limit would unfairly restrict existing operators from participating in new services and technologies without providing any concomitant benefit. In this respect, application of an overly restrictive attribution rule would also be antithetical to the goal of

maximizing competition because it will preclude existing service providers from becoming competitors in new services.

Furthermore, the use of an overly restrictive attribution rule will unduly limit entities holding minority interests in a number of ventures (and therefore lacking the ability or intent to exercise operational control) from taking part in new service offerings. Funding from venture capital sources likewise may be undercut by adoption of the Commission's proposed attribution rule. Financing from such sources is generally essential to the survival of new competitors and the success of new services.

Finally, the use of a flat five percent attribution rule in the context of the numerous services classified as CMRS is at odds with the Commission's recently revised PCS rules. As mentioned, in adopting the 20 percent cellular/PCS cross-ownership attribution rule, the Commission explicitly took into account the history of cellular licensing and settlement policies.[16] The spectrum cap proposal in this docket contains no similar accommodation of the practical considerations that characterize the various services classified as CMRS. This discrepancy underscores the unacceptability of the Commission's five percent attribution proposal.

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16 *Broadband PCS Reconsideration Order* ¶ 110.

IV. CONCLUSION

As the foregoing comments demonstrate, Motorola strongly supports the efforts of Congress and the Commission to promote the development of competition in the mobile services marketplace. Accordingly, Motorola is also supportive of the Commission's attempt to ensure that CMRS competitors are subject to comparable technical, operational, and licensing rules. Although Motorola is not discussing this aspect of the *Further Notice* in these initial comments, it plans to do so on reply.

Motorola disagrees with the Commission's suggestion that the level of competition in the mobile services marketplace might be increased by the imposition of a general cap on the amount of CMRS spectrum that licensees may aggregate, and urges the Commission to abandon its spectrum cap proposal. The imposition of an overall CMRS spectrum cap is unnecessary and would unfairly prohibit existing licensees from participating in new service offerings, thereby hindering the effective delivery of new services to the public.

Respectfully submitted,

Motorola, Inc.

CERTIFICATE OF SERVICE

I, Carol J. Scanlan, a secretary at the law firm of Wiley, Rein and Fielding, hereby certify that courtesy copies of the attached "Comments of Motorola, Inc." have been served via hand delivery on the following persons on this 20th day of June, 1994:

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